

REMARKS

The Office Action mailed January 29, 2003 has been reviewed and carefully considered. Claims 1-16 are pending, claims 1, 7, 10 and 16 being the independent claims. Claim 7 has been amended. Claims 1, 10 and 16 have not been amended. The Examiner's indication of allowable subject matter for claim 9 is appreciated.

Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

Claims 1, 4, 5, 7, 10, 13 and 14 were rejected under 35 U.S.C. 102(b) as allegedly anticipated by U.S. Patent No. 5,151,608 to Torii et al. ("Torii").

Claim 1 recites "processing a deviation direction and a deviation amount based on a positional relationship between an image of said light beam shifted on the surface of said workpiece and a predetermined reference image." The Torii reference, by contrast, fails to disclose this limitation.

Item 2 of the Office Action cites column 6, lines 20-35 of the Torii reference as disclosing the "positional relationship" specified by claim 1. In explaining this, item 8 of the Office Action suggests that the Torii reference value (col. 6, line 21) at various CCD-cell positions can be construed as the "predetermined reference image" of claim 1 in that Torii is "comparing the detected image with a reference image having identical dimension." Presumably, then, even though the two images are identically dimensioned, they are not identically positioned, because the language of claim 1 specifically requires "processing a deviation direction and a deviation amount based on a positional relationship between an image of said light beam shifted on the surface of said

workpiece and a predetermined reference image.” The Torii reference, by contrast, fails to disclose this limitation.

It is unclear how it can properly be alleged that Torii discloses “processing a deviation direction and a deviation amount based on a positional relationship between an image of said light beam shifted on the surface of said workpiece and a predetermined reference image.”

Claim 1 recites “a detector coupled to said light source for detecting the light beam received by said workpiece, and for processing a deviation direction and a deviation amount based on a positional relationship between an image of said light beam shifted on the surface of said workpiece and a predetermined reference image.”

During examination, the claims must be interpreted as broadly as their terms reasonably allow. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) MPEP 2111.01.

When not defined by applicant in the specification, the words of a claim must be given their plain meaning. In other words, they must be read as they would be interpreted by those of ordinary skill in the art. >Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001) MPEP 2111.01.

One of ordinary skill in the art would not interpret the “positional relationship” between two images as recited in claim 1 in accordance with the interpretation being proposed by the Office Action.

In particular, Torii fails to disclose or suggest:

“a light source for directing a light beam onto the top surface of said workpiece; and

a detector coupled to said light source for detecting the light beam received by said workpiece, and for processing a deviation direction and a deviation amount based

on a positional relationship between an image of said light beam shifted on the surface of said workpiece and a predetermined reference image.”

Claim 1 is not anticipated by Torii for at least this reason.

Claim 10 has been amended to recite, like claim 1, processing based on a positional relationship between an image of said detected light beam shifted on the surface of said workpiece and a reference image, and is likewise deemed to be patentable over the cited reference.

Claim 7 as amended recites “detecting a lateral shift of said detected light beam on the top surface of said workpiece, said shift occurring as a result of a vertical translation of said top surface.” The purported “lateral shift” of Torii occurs as a result of rotation of the scanning beam by operation of mirror 2, not “as a result of a vertical translation of said top surface” as recited in claim 7. Accordingly, claim 7 as amended is believed not to be anticipated by the Torii reference. Support for the amendment of claim 7 is found in the specification (e.g., page 7, lines 10-15).

Claims 2, 6, 8, 11 and 15 were rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Torii.

These claims depend from base claims 1, 7 and 10, respectively. Torii fails to disclose or suggest limitations of each base claim, as described above, and the dependent claims are deemed to likewise be patentable for at least this reason.

Claim 16 was rejected under 35 U.S.C 103(a) as allegedly unpatentable over U.S. Patent No. 4,335,942 to Tsunekawa et al. (“Tsunekawa”).

Item 5 of the Office Action characterizes IM1 of Tsunekawa as the “first image” of claim 16 and IB1 of Tsunekawa as the “second image” of claim 16, but the

reference makes no disclose or suggestion of “adjusting the vertical position of said workpiece such that the first and second images coincide” as explicitly required by the language of claim 16.

Moreover, there is no disclosure or suggestion in Tsunekawa of a workpiece.

Even if the term “workpiece” could be misconstrued as item 8 suggests, there is no disclosure or suggestion of “adjusting the vertical position of said workpiece such that the first and second images coincide.” Item 5 of the Office Action seems to suggest that motivation would have existed to move the workpiece toward the camera instead to the camera toward the workpiece due to the “more expensive and delicate lens motor mechanism,” but moving the whole camera avoids moving the lens mechanism.

Claim 16 further recites “using . . . to provide an indication of distance between said first and second images received by said workpiece.”

Item 5 of the Office Action suggests that IM1 and IB1 are the first and second images, and the reference fails to “provide an indication of distance” between them. Item 8 of the Office Action suggests that signals MU1-MU4 provide this indication, but the applicant fails to see any support for this proposition in the reference. Moreover, the reference fails to disclose or suggest “using said first and second light beams to provide an indication of distance between said first and second images received by said workpiece.”

For at least all of the above reasons, claim 16 is not rendered obvious by the cited reference.

Claim 9 was objected to for dependence from a rejected claim, but was indicated by the Examiner to be allowable if redrafted into independent form. Since claim 7 as amended has been shown to be patentable over Torii, dependent claim 9 is likewise deemed to be patentable.

As to the other rejected claims, they each depend from a respective base claim and are deemed to be patentable for at least the same reasons.

Amendment After Final Rejection
Serial No. 09/874,420

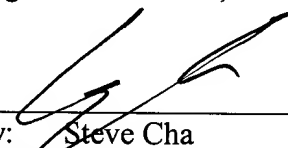
For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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9/8/03


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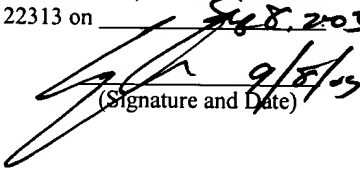
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